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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/581,223

06/01/2006

Thomas Ehrhardt

1281000260US

7943

23416

7590

03/24/2009

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EXAMINER

WORLEY, CATHY KINGDON

ART UNIT

PAPER NUMBER

1638

MAIL DATE

DELIVERY MODE

03/24/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/581,223	Applicant(s) EHRHARDT ET AL.	
	Examiner CATHY K. WORLEY	Art Unit 1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-35 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Groups I-VIII, claim(s) 2-4, drawn to a method for identifying herbicides comprising utilizing a 2-methyl-6-solanylbenzoquinone methyltransferase; wherein the method utilizes a nucleic acid sequence that is defined by its relationship to a specified sequence; wherein the specified sequence for groups I-VIII is SEQ ID NO:1-8, respectively. If one of the amino acid sequences (SEQ ID NO: 2, 4, 6, or 8) is encoded by one of the nucleic acid sequences (SEQ ID NO:1, 3, 5, or 7), then the Applicant should disclose this, and these two will be rejoined.

CLAIM 1 LINKS THE INVENTIONS OF GROUPS I-VIII

Groups IX-XV, claim(s) 5, 7-9, 19, 29, 30, and 35, drawn to an isolated nucleic acid sequence that is defined by its relationship to a specified sequence; wherein the

specified sequence for groups IX-XV is SEQ ID NO:1 and 3-8, respectively. If one of the amino acid sequences (SEQ ID NO: 4, 6, or 8) is encoded by one of the nucleic acid sequences (SEQ ID NO:1, 3, 5, or 7), then the Applicant should disclose this, and these two will be rejoined.

Groups XVI-XXII, claim(s) 6, drawn to a polypeptide with 2-methyl-6-solanylbenzoquinone methyltransferase activity wherein the polypeptide is encoded by a nucleic acid defined by its relationship to a specified sequence; wherein the specified sequence for groups XVI-XXII is SEQ ID NO:1 and 3-8, respectively. If one of the amino acid sequences (SEQ ID NO: 4, 6, or 8) is encoded by one of the nucleic acid sequences (SEQ ID NO:1, 3, 5, or 7), then the Applicant should disclose this, and these two will be rejoined.

Groups XXIII-XXX, claim(s) 11-16, drawn to a method for identifying herbicidally active substances that utilizes a polypeptide with 2-methyl-6-solanylbenzoquinone methyltransferase activity wherein the polypeptide is encoded by a nucleic acid defined by its relationship to a specified sequence; wherein the specified sequence for groups XXIII-XXX is SEQ ID NO:1-8, respectively. If one of the amino acid sequences (SEQ ID NO: 2, 4, 6, or 8) is encoded by one of the nucleic acid sequences (SEQ ID NO:1, 3, 5, or 7), then the Applicant should disclose this, and these two will

be rejoined. Claims directed to a non-elected sequence will be withdrawn from consideration.

CLAIMS 10, 18, AND 20 LINK THE INVENTIONS OF GROUPS XIII-XXX

Group XXXI, claim(s) 21 and 22, drawn to an herbicidally active compound.

Group XXXII, claim(s) 23, drawn to a process for the preparation of an agrochemical composition.

Group XXXIII, claim(s) 24, drawn to a method for controlling undesired vegetation.

Groups XXXIV and XXXV, claim(s) 25 and 26, drawn to a method for generating nucleic acid sequences which encode 2-methyl-6-solanylbenzoquinone methyltransferase, wherein the sequence is defined by its relationship to a specified sequence; wherein the specified sequence for group XXXIV is SEQ ID NO:3 and the specified sequence for group XXXV is SEQ ID NO:4. If SEQ ID NO:3 encodes SEQ ID NO:4, then the restriction between groups XXXIV and XXXV will be withdrawn.

Groups XXXVI-XLIII, claim(s) 27 (in part), drawn to a method for generating transgenic plants by overexpressing a nucleic acid that is defined by its relationship to a specified sequence; wherein the specified sequence for groups XXXVI-XLIII is

SEQ ID NO:1-8, respectively. If one of the amino acid sequences (SEQ ID NO: 2, 4, 6, or 8) is encoded by one of the nucleic acid sequences (SEQ ID NO:1, 3, 5, or 7), then the Applicant should disclose this, and these two will be rejoined. It is noted that claim 27 recites “resistant to substances according to claim 20” and claim 20 does not have any substances. The Examiner believes this is a typographical error, and claim 27 should probably depend from claim 21. The Applicant is advised to amend the claim to be properly dependent if they elect one of these inventions.

Groups XLIV-LI, claim(s) 28, drawn to a transgenic plant generation by a method for generating transgenic plants by overexpressing a nucleic acid that is defined by its relationship to a specified sequence; wherein the specified sequence for groups XLIV-LI is SEQ ID NO:1-8, respectively. If one of the amino acid sequences (SEQ ID NO: 2, 4, 6, or 8) is encoded by one of the nucleic acid sequences (SEQ ID NO:1, 3, 5, or 7), then the Applicant should disclose this, and these two will be rejoined. It is noted that claim 27 recites “resistant to substances according to claim 20” and claim 20 does not have any substances. The Examiner believes this is a typographical error, and claim 27 should probably depend from claim 21. The Applicant is advised to amend the claim to be properly dependent if they elect one of these inventions.

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Groups LII-LVIII, claim(s) 32 (in part), drawn to a method for identifying growth-regulatory substance that utilizes a support having a nucleic acid molecule defined by its relationship to a specified sequence; wherein the specified sequence for groups LII-LVIII is SEQ ID NO:1 and 3-8, respectively. If one of the amino acid sequences (SEQ ID NO: 4, 6, or 8) is encoded by one of the nucleic acid sequences (SEQ ID NO:1, 3, 5, or 7), then the Applicant should disclose this, and these two will be rejoined.

CLAIMS 17 AND 31 LINK THE INVENTIONS OF GROUPS LII-LVIII

Group LIX, claim(s) 33, drawn to a process for the preparation of an agrochemical composition.

Group LX, claim(s) 34, drawn to a method for controlling undesired vegetation and/or for regulating the growth of plants.

2. Claim 1 links the inventions of groups I-VIII. Claims 10, 18, and 20 link the inventions of groups XIII-XXX. Claims 17 and 31 link the inventions of groups LII-LVIII. The restriction requirement between the linked inventions is subject to the nonallowance of the linking claims. Upon the allowance of the linking claims, the restriction requirement as to the linked inventions shall be withdrawn and any claims depending from or otherwise including all the limitations of the allowable

linking claims will be entitled to examination in the instant application. Applicants are advised that if any such claims depending from or including all the limitations of the allowable linking claims are presented in a continuation or divisional application, the claims of the continuation or divisional application may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant applications. Where a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. *In re Ziegler*, 44 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP 804.01.

3. The inventions listed as Groups I-LX do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The technical feature linking groups I-LX is a polypeptide having 2-methyl-6-solanylbenzoquinone methyltransferase or a nucleic acid encoding such a polypeptide or a compound with herbicidal or growth regulatory activity that is a substrate for a 2-methyl-6-solanylbenzoquinone methyltransferase. However, in the prior art (GenBank Accession AB054257; published on June 4, 2003), Motohashi et al. teach a nucleic acid with 100% identity to the instant SEQ ID NO:3 (see alignment appended to this Office Action); and this nucleic acid inherently encodes a polypeptide with 2-methyl-6-solanylbenzoquinone methyltransferase activity. Therefore, the technical feature linking the inventions of groups I-LX does not

constitute a special technical feature as defined by PCT Rule 13.2 as it does not define a contribution over the prior art.

Accordingly, Groups I-LX are not so linked by the same or a corresponding special technical feature as to form a single general inventive concept.

4. Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

6. The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.** Further, note that the prohibition against double patenting

rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CATHY K. WORLEY whose telephone number is (571)272-8784. The examiner can normally be reached on M-F 10:00 - 4:00, with additional variable hours before 10:00 and after 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on (571) 272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Cathy K. Worley/
Primary Examiner, Art Unit 1638

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APPENDIX – SEQUENCE ALIGNMENT WITH SEQ ID NO:3

RESULT 3
AB054257
LOCUS AB054257 1017 bp mRNA linear PLN 14-FEB-2004
DEFINITION Arabidopsis thaliana mRNA for APG1, complete cds.
ACCESSION AB054257
VERSION AB054257.1 GI:15005008
KEYWORDS .
SOURCE Arabidopsis thaliana (thale cress)
ORGANISM Arabidopsis thaliana
Eukaryota; Viridiplantae; Streptophyta; Embryophyta;
Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core
eudicotyledons;
rosids; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
REFERENCE 1
AUTHORS Motohashi,R., Ito,T., Kobayashi,M., Taji,T., Nagata,N., Asami,T.,
Yoshida,S., Yamaguchi-Shinozaki,K. and Shinozaki,K.
TITLE Functional analysis of the 37 kDa inner envelope membrane
polypeptide in chloroplast biogenesis using a Ds-tagged
Arabidopsis
pale-green mutant
JOURNAL Plant J. 34 (5), 719-731 (2003)
PUBMED 12787252
REFERENCE 2 (bases 1 to 1017)
AUTHORS Motohashi,R. and Shinozaki,K.
TITLE Direct Submission
JOURNAL Submitted (16-JAN-2001) Reiko Motohashi, RIKEN Genomic Sciences
Center, Plant Functional Genomics Research Group; 3-1-1 koyadai,
Tsukuba, Ibaraki 305-0074, Japan (E-
mail:motohasi@rtc.riken.go.jp,
Tel:81-298-36-4359, Fax:81-298-36-9060)
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DQPI"

ORIGIN

Query Match 100.0%; Score 1017; DB 4; Length 1017;
Best Local Similarity 100.0%; Pred. No. 1.8e-291;
Matches 1017; Conservative 0; Mismatches 0; Indels 0; Gaps
0;

Qy 1 ATGGCCTCTTTGATGCTCAACGGGGCCATTACCTTCCCCAAAGGTTTAGGTTCCCCTGGT 60
|
Db 1 ATGGCCTCTTTGATGCTCAACGGGGCCATTACCTTCCCCAAAGGTTTAGGTTCCCCTGGT 60

Qy 61 TCCAATTTGCATGCCAAATCGATTCTCGGCCGACCTTACTCTCAGTTACCCGAACCTCC
120
|
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Db 720	661	TCTCGCTTCTTTTCTGATGTCTGGATGCTCTTCCCCAAGGAGGAAGAGTACATTGAGTGG
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|||||
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960

Qy 961 ATCCCTATCTACATGTGGATCAAGGATCAGATCGTTCCCAAAGACCAACCCATCTGA 1017

|||||
Db 961 ATCCCTATCTACATGTGGATCAAGGATCAGATCGTTCCCAAAGACCAACCCATCTGA 1017

/Cathy K. Worley/

Primary Examiner, Art Unit 1638